

TITLE 327 WATER POLLUTION CONTROL BOARD

Proposed Rule as Preliminarily Adopted

LSA Document #00-111

DIGEST

Amends 37 IAC 8-2 concerning lead and copper. Effective 30 days after filing with the secretary of state.

HISTORY

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SECTION 1. 327 IAC 8-2-37 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-37 Monitoring requirements for lead and copper in tap water

Authority: IC 13-1-3-4; IC 13-7-2-15; IC 13-7-7-5; IC 13-7-14-5

Affected: IC 13-7

Sec. 37. (a) The following are requirements for sample site locations:

(1) By the applicable date of commencement of monitoring under subsection (d)(1), each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meet the requirements of this section and that are sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in subsection (c). All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designated to remove inorganic contaminants.

(2) A water system shall use the information on lead, copper, and galvanized steel that it is required to collect under section 22 of this rule (special monitoring for corrosivity characteristics) when conducting a materials evaluation. When an evaluation of the information collected under section 22(d) of this rule is insufficient to locate the requisite

number of lead and copper sampling sites that meet the targeting criteria in subdivisions (3) through (7), the water system shall review the sources of information listed in clauses (A) through (C) in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information, where possible, in the course of its normal operations, such as checking service line materials when reading water meters or performing maintenance activities:

(A) all plumbing codes, permits, and records in the files of the building department which indicate the plumbing materials that are installed within publicly or privately owned structures connected to the distribution system;

(B) all inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and

(C) all existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

(3) The sampling sites selected for a community water system's sampling pool (tier one (1) sampling sites) shall consist of:

(A) single family structures; or

(B) multiple family residences if such residences comprise at least twenty percent (20%) of the structures served by water systems that:

(i) contain

(aa) copper pipes with lead solder installed after 1982; or ~~contain~~

(bb) lead pipes; ~~or~~

(ii) are served by a lead service line, or

(iii) both **items (i) and (ii) apply**

(4) Any community water system with insufficient tier one (1) sampling sites shall complete its sampling pool with tier two (2) sampling sites consisting of buildings, including multiple family residences that:

(A) contain

(i) copper pipes with lead solder installed after 1982; or ~~contain~~

(ii) lead pipes; ~~or~~

(B) are served by a lead service line, or

(C) both **clauses (A) and (B) apply**

(5) Any community water system with insufficient tier one (1) and tier two (2) sampling sites shall complete its sampling pool with tier three (3) sampling sites consisting of single family structures that contain copper pipes with lead solder installed before 1983. **A community water system with insufficient tier one (1), tier two (2), and tier three (3) sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For the purposes of this subdivision, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.**

(6) The sampling sites selected for a nontransient noncommunity water system (tier one (1) sampling sites) shall consist of buildings that:

(A) contain

- (i) copper pipes with lead solder installed after 1982; or ~~contain~~
- (ii) lead pipes; ~~or~~

(B) are served by a lead service line, or

(C) both **clauses (A) and (B) apply**

(7) A nontransient noncommunity water system with insufficient tier one (1) sites that meet the targeting criteria in subdivision (6) shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983. **If additional sites are needed to complete the sampling pool, the nontransient noncommunity water system shall use representative sites throughout its distribution system. For the purpose of this subdivision, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.**

~~(8) Any water system whose sampling pool does not consist exclusively of tier one (1) sites shall demonstrate, in a letter submitted to the commissioner under section 46(a)(2) of this rule, why a review of the information listed in subdivision (2) was inadequate to locate a sufficient number of tier one (1) sites. Any community water system which includes tier three (3) sampling sites in its sampling pool shall demonstrate in such letter why it was unable to locate a sufficient number of tier one (1) and tier two (2) sampling sites.~~

~~(9) (8) Any water system whose distribution system contains lead service lines shall draw fifty percent (50%) of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and fifty percent (50%) of the samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall demonstrate in a letter submitted to the commissioner under section 46(a)(4) of this rule why the system was unable to locate a sufficient number of such sites. Such a water system shall collect first draw samples from all of the sites identified as being served by such lines.~~

(b) The following are requirements for sample collection methods:

(1) All tap samples for lead and copper collected in accordance with this subsection, with the exception of lead service line samples collected under section 43(c) of this rule **and samples collected under subdivision (5)**, shall be first draw samples.

(2) Each first draw tap sample for lead and copper shall be one (1) liter in volume and have stood motionless in the plumbing system of each sampling site for at least six (6) hours. First draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First draw samples from a nonresidential building shall be **one (1) liter in volume and shall be** collected at an interior tap from which water is typically drawn for consumption. **Nonfirst draw samples collected in lieu of first draw samples pursuant to subdivision (5) shall be one (1) liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption.**

First draw samples may be collected by the system or the system may allow residents to collect first draw samples after instructing the residents of the sampling procedures specified in this subdivision. **To avoid problems of residents handling nitric acid, acidification of first draw samples may be done up to fourteen (14) days after the sample is collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in the EPA-approved method**

before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

(3) Each service line sample shall be one (1) liter in volume and have stood motionless in the lead service line for at least six (6) hours. Lead service line samples shall be collected in one (1) of the following three (3) ways:

(A) At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line.

(B) Tapping directly into the lead service line.

(C) If the sampling site is a building constructed as a single family residence, allowing the water to run until there is a significant change in temperature ~~which~~ **that** would be indicative of water that has been standing in the lead service line.

(4) A water system shall collect each first draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria and is within reasonable proximity of the original site.

(5) A nontransient noncommunity water system, or a community water system meeting the criteria of section 44(c)(7)(A) and 44(c)(7)(B) of this rule, that does not have enough taps that can supply first draw samples, as defined in section 1 of this rule, may apply to the commissioner in writing to substitute nonfirst draw samples. Such systems must collect as many first draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The commissioner has the discretion to waive the requirement for prior approval of nonfirst draw sample sites selected by the system by written notification to the system.

(c) Water systems shall collect at least one (1) sample during each monitoring period specified in subsection (d) from the number of sites listed in the second column of the table in this subsection (standard monitoring). A system conducting reduced monitoring under subsection (d)(4) ~~may shall~~ **shall** collect **at least** one (1) sample from the number of sites specified in the third column of the table in this subsection during each monitoring period specified in subsection (d)(4). **Such reduced monitoring sites shall be representative of the sites required for standard monitoring. The commissioner may specify sampling locations when a system is conducting reduced monitoring.**

System Size (Number of People Served)	Number of Sites (Standard Monitoring)	Number of Sites (Reduced Monitoring)
> 100,000	100	50
10,001 to 100,000	60	30

3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
<101	5	5

(d) The following are requirements for the timing of monitoring:

(1) For initial tap sampling, the first six (6) month monitoring period for small, medium size, and large systems shall begin on the following dates:

<u>System Size (Number of People Served)</u>	<u>First Six Month Monitoring Period Begins On</u>
> 50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
< 3,301	July 1, 1993

The monitoring requirements are as follows:

(A) All large systems shall monitor during two (2) consecutive six (6) month periods.

(B) All small and medium size systems shall monitor during each six (6) month monitoring period until:

(i) the system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under section 40 of this rule, in which case the system shall continue monitoring in accordance with subdivision (2); or

(ii) the system meets the lead and copper action levels during two (2) consecutive six (6) month monitoring periods in which case the system may reduce monitoring in accordance with subdivision ~~(d)(4)~~ (4).

(2) Tap water monitoring requirements for lead and copper after corrosion control and source water treatment are as follows:

(A) Any large system ~~which~~ **that** installs optimal corrosion control treatment under STEP FOUR of section 40(d) of this rule shall monitor during two (2) consecutive six (6) month monitoring periods by the date specified in STEP FIVE of section 40(d) of this rule.

(B) Any small or medium size system ~~which~~ **that** installs optimal corrosion control treatment under STEP FIVE of section 40(e) of this rule shall monitor during two (2) consecutive six (6) month monitoring periods by the date specified in STEP SIX of section 40(e) of this rule.

(C) Any system ~~which~~ **that** installs source water treatment under STEP THREE of section 42(a) of this rule shall monitor during two (2) consecutive six (6) month monitoring periods by the date specified in STEP FOUR of section 42(a) of this rule.

(3) After the commissioner specifies the values for water quality control parameters under section 41(f) of this rule, the system shall monitor during each subsequent six (6) month monitoring period, with the first monitoring period to begin on the date the commissioner specifies optimal values under section 41(f) of this rule.

(4) Reduced monitoring requirements shall be as follows:

(A) A small or medium size water system that meets the lead and copper action levels during each of two (2) consecutive six (6) month monitoring periods may reduce the number of samples in accordance with subsection (c), and reduce the frequency of sampling to once per year.

(B) Any water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the commissioner under section 41(f) of this rule during each of two (2) consecutive six (6) month monitoring periods may ~~request that the commissioner allow the system to~~ reduce the frequency of monitoring to once per year and to reduce the number of lead and copper samples in accordance with subsection (c) **if it receives written approval from the commissioner.** The commissioner shall:

(i) review ~~the monitoring, treatment, and other relevant~~ information submitted by the water system **in accordance with section 46 of this rule;** ~~and shall make the decision~~

(ii) **notify the system** in writing, ~~setting forth the basis for the determination. when the commissioner determines the system is eligible to commence reduced monitoring; and~~ The commissioner shall

(iii) review and, where appropriate, revise the **commissioner's** determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(C) A small or medium size water system that meets the lead and copper action levels during three (3) consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three (3) years. Any water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the commissioner under section 41(f) of this rule during three (3) consecutive years of monitoring may ~~request that the commissioner allow the system to~~ reduce the frequency of monitoring from annually to once every three (3) years **if it receives written approval from the commissioner.** The commissioner shall:

(i) review ~~the monitoring, treatment, and other relevant~~ information submitted by the water system **in accordance with section 46 of this rule;** ~~and shall make the decision~~

(ii) **notify the system** in writing, ~~setting forth the basis for the determination. when the commissioner determines the system is eligible to reduce the frequency of monitoring to once every three (3) years;~~ The commissioner shall

(iii) review and, where appropriate, revise the determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(D) A water system that reduces the number and frequency of sampling shall collect these samples from **representative** sites included in the pool of targeted sampling sites identified in subsection (a). Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August, or September **unless the commissioner has approved a different sampling period in accordance with the following:**

(i) **At the commissioner's discretion, a different period for conducting the lead and copper tap sampling may be approved for systems conducting a reduced number of samples. Such a period shall be no longer than four (4) months and must represent a time of normal operation where the highest levels of lead are most likely to occur. The commissioner shall designate a period that represents a time of normal operation for the system as follows:**

(AA) **For a nontransient noncommunity water system that does not operate during the months of June through September.**

(BB) **Where the period of normal operation having the highest levels of lead that are most likely to occur is not known.**

(ii) **Systems monitoring annually that have been collecting samples during the months of June through September and have received approval from the commissioner to alter their sample collection period pursuant to subsection (a), shall collect their next round of samples during a period that ends no later than twenty-one (21) months after the previous round of sampling.**

(iii) **Systems monitoring triennially that have been collecting samples during the months of June through September and have received approval from the commissioner to alter their sample collection period pursuant to subsection (a), shall collect their next round of samples during a time period that ends no more than forty-five (45) months after the previous round of sampling. Subsequent rounds of sampling shall be collected annually or triennially as required by this section.**

(iv) **Small systems with waivers granted pursuant to subsection (g), that have been collecting samples during the months of June through September and have received approval from the commissioner to alter their sample collection period under item (i) must collect their next round of samples before the end of the nine (9) year period.**

(E) **A water system that demonstrates for two (2) consecutive six (6) month monitoring periods that the tap water lead level computed under section 36(c)(3) of this rule is less than or equal to five-thousandths (0.005) milligram per liter (mg/l) and the tap water copper level computed under section 36(c)(3) of this rule is less than or equal to sixty-five hundredths (0.65) mg/l may reduce the number of samples in accordance with subsection (c) and reduce the frequency of sampling to once every three (3) calendar years.**

~~(E)~~ (F) **The following apply when a small or medium size water system subject to reduced monitoring exceeds the lead or copper action level:**

(i) **A small or medium size water system subject to reduced monitoring that**

exceeds the lead or copper action level shall resume sampling in accordance with subdivision (3) and collect the number of samples specified for standard monitoring under subsection (c). Such system shall also conduct water quality parameter monitoring in accordance with section 38(c), 38(d), or 38(e) of this rule, as appropriate, during the monitoring period in which it exceeds the action level. Any water system subject to reduced monitoring frequency that fails to operate within the range of values for the water quality control parameters specified by the commissioner under section 41(f) of this rule shall resume tap water sampling in accordance with subdivision (3) and collect the number of samples specified for standard monitoring under subsection (c): **may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subsection (c) after it has completed two (2) subsequent consecutive six (6) month rounds of monitoring that meet the criteria of clause (A) or may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either clause (C) or (E).**

(ii) A water system subject to the reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the commissioner under section 41(f) of this rule for more than nine (9) days in any six (6) month period specified in section 38(d) of this rule shall conduct tap water sampling for lead and copper at the frequency specified in subdivision (3), collect the number of samples specified for standard monitoring under subsection (c), and shall resume monitoring for water quality parameters in accordance with section 38(d) of this rule. Such a system may resume reduced monitoring for lead and copper at the tap and water quality parameters within the distribution system under the following conditions:

(AA) The system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subsection (c) after it has completed two (2) subsequent six (6) month rounds of monitoring that meets the criteria of clause (B) and the system has received written approval from the commissioner that it is appropriate to resume reduced monitoring on an annual frequency.

(BB) The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either clause (C) or (E) and the system has received written approval from the commissioner that it is appropriate to resume triennial monitoring.

(CC) The system may reduce the number of water quality parameter tap water samples required in accordance with

section 38(f)(1) of this rule and the frequency with which it collects such samples in accordance with section 38(f)(2) of this rule. Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of section 38(f)(2), that it has requalified for triennial monitoring.

(G) A water system subject to a reduced monitoring frequency under this subdivision that either adds a new source of water or changes any water treatment shall inform the commissioner in writing in accordance with section 46(a)(3) of this rule. The commissioner may require the system to resume sampling in accordance with subdivision (3) and collect the number of samples specified for standard monitoring under subsection (c) or take other appropriate steps such as increased water quality parameter monitoring or re-evaluation of its corrosion control treatment given the potentially different water quality considerations.

(e) The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the commissioner in making any determinations (i.e., calculating the ninetieth percentile lead or copper level) under section 36 of this rule, this section, and sections 38 through 47 of this rule.

(f) A sample invalidated under this subsection does not count toward determining lead or copper ninetieth percentile levels under section 36(c)(3) of this rule or toward meeting the minimum monitoring requirements of subsection (c). The following criteria specify invalidation of samples:

(1) The commissioner may invalidate a lead or copper tap water sample if at least one (1) of the following conditions is met:

(A) The laboratory establishes that improper sample analysis caused erroneous results.

(B) The commissioner determines that the sample was taken from a site that did not meet the site selection criteria of this section.

(C) The sample container was damaged in transit.

(D) There is substantial reason to believe that the sample was subject to tampering.

(2) The system must report the results of all samples to the commissioner and all supporting documentation for samples the system believes should be invalidated.

(3) To invalidate a sample under subdivision (1), the decision and the rationale for the decision must be documented in writing. The commissioner may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than the original sample.

(4) The water system must collect replacement samples for any samples invalidated under this section if, after the invalidation of one (1) or more samples the system has too few samples to meet the minimum requirements of subsection (c). Any such replacement samples must be taken as soon as

possible, but no later than twenty (20) days after the date the commissioner invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(g) A small system that meets the criteria of this subsection may apply to the commissioner to reduce the frequency of monitoring for lead and copper under this section to once every nine (9) years for a full waiver if it meets all of the materials criteria specified in subdivision (1) and all of the monitoring criteria specified in subdivision (2). A small system that meets the criteria of subdivisions (1) and (2) only for lead or only for copper, may apply to the commissioner for a partial waiver that may reduce the frequency of tap water monitoring for that contaminant only. The following are the criteria for lead and copper waivers:

(1) The system must demonstrate that the distribution system, service lines, and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing or copper-containing materials or both, according to the following:

(A) To qualify for a lead waiver, either a full waiver or a waiver of the tap water monitoring requirements, the water system must provide certification and supporting documentation to the commissioner that the system is free of all lead-containing materials as demonstrated by the following:

(i) There are no plastic pipes that or plastic service lines that contain lead plasticizers.

(ii) The system is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fitting and fixtures unless such fittings and fixtures meet the specifications of any standard established pursuant to the Safe Drinking Water Act at 42 U.S.C. 300g-6(e).

(B) To qualify for copper waiver, either a full waiver or a waiver of the tap water monitoring requirements, the water system must provide certification and supporting documentation to the commissioner that the system contains no copper pipes or copper service lines.

(2) The system must have completed at least one (1) six (6) month round of standard tap water monitoring for lead and copper at sites approved by the commissioner and from the number of sites required by subsection (c) and demonstrate that the ninetieth percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing or copper-containing materials or both, as appropriate, meet the following

criteria:

(A) To qualify for a full waiver or a lead waiver, the system must demonstrate that the ninetieth percentile lead level does not exceed five-thousandths (0.005) mg/l.

(B) To qualify for a full waiver or a copper waiver, the system must demonstrate that the ninetieth percentile for copper does not exceed sixty-five hundredths (0.65) mg/l.

(3) The commissioner shall notify the system of its waiver determination, in writing, setting forth the basis of its decision and any condition of the waiver. The small system must continue monitoring for lead and copper at the tap as required by subsection (d), as appropriate, until it receives written notification from the commissioner that the waiver has been approved. As a condition of the waiver, the commissioner may require the system to perform specific activities to avoid the risk of lead or copper concentration of concern in tap water, including the following:

(A) Limited monitoring.

(B) Periodic outreach to customers to remind them to avoid installation of materials that might void the waiver.

(4) The monitoring requirements for systems with a full waiver, or a lead waiver, or a copper waiver are as follows:

(A) A system with a full waiver shall conduct tap water monitoring for lead and copper in accordance with subsection (d)(4)(D) at the reduced number of sampling sites specified in subsection (c) at least once every nine (9) years and provide the materials certification specified in subdivision (1) for both contaminants along with the monitoring results.

(B) A system with a partial waiver shall conduct tap water monitoring for the waived contaminant in accordance with subsection (d)(4)(D) at the reduced number of sampling sites specified in subsection (c) at least once every nine (9) years and provide the materials certification specified in subdivision (1) pertaining to the waived contaminant along with the monitoring results. Such a system must also continue to monitor for the nonwaived contaminant in accordance with the requirements of subsection (d), as appropriate.

(C) If a system with a full or partial waiver adds a new source of water or changes any water treatment, the system must notify the commissioner in writing in accordance with section 46(a)(3). The commissioner has the authority to require the system to add or modify waiver conditions, if it deems such modifications are necessary to address treatment or source water changes at the system. Conditions may include the following:

(i) Requiring recertification that the system is free of lead-containing or copper-containing materials, or both.

(ii) Requiring an additional round or rounds of monitoring.

(D) If a system with a full or partial waiver becomes aware that it is no longer free of lead-containing or copper-containing materials, or both, as appropriate, as a result of new construction or repairs, the system shall notify the commissioner in writing no later than sixty (60) days after becoming aware of such a change.

(5) If a system continues to satisfy the requirements of subdivision (4), the waiver will be renewed automatically unless any of the conditions listed in this section occurs. A system whose waiver has been revoked may reapply for a waiver at such time as it again meets the appropriate materials and monitoring criteria of subdivisions (1) and (2). The waiver may be revoked if any of the following conditions occur:

(A) A system with a full waiver or a lead waiver no longer satisfies the materials criteria of subdivision (1)(A) or has a ninetieth percentile lead level greater than five-thousandths (0.005) mg/l.

(B) A system with a full waiver or a copper waiver no longer satisfies the materials criteria of subdivision (g)(1)(B) or has a ninetieth percentile copper level greater than sixty-five hundredths (0.65) mg/l.

(C) The commissioner notifies the system, in writing, that the waiver has been revoked, setting forth the basis of its decision.

(6) A system whose full or partial waiver has been revoked by the commissioner is subject to the corrosion control treatment and lead and copper tap water monitoring requirements as follows:

(A) If the system exceeds the lead or copper action level, the system must implement corrosion control treatment in accordance with the deadlines specified in section 40(e) of this rule and any other applicable requirements of section 36 of this rule, this section and sections 38 through 47 of this rule.

(B) If the system meets both the lead and copper action level, the system must monitor for lead and copper at the tap no less frequently than once every three (3) years using the reduced number of sample sites specified in subsection (c).

(Water Pollution Control Board; 327 IAC 8-2-37; filed Aug 24, 1994, 8:15 a.m.: 18 IR 68; errata filed Oct 11, 1994, 2:45 p.m.: 18 IR 532)

SECTION 2. 327 IAC 8-2-38 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-38 Monitoring requirements for water quality parameters

Authority: IC 13-13-5; IC 13-14-8-7; IC 13-14-9; IC 13-18-3; IC 13-18-16

Affected: IC 13-18

Sec. 38. (a) All large water systems and all small and medium size water systems that exceed the lead or copper action level shall monitor water quality parameters in addition to lead and copper in accordance with this section. The requirements of this section are summarized in the table in subsection (b)(2)(A).

(b) General monitoring requirements for water quality parameters shall be as follows:

(1) Requirements for sample collection methods shall be as follows:

(A) Tap samples shall be representative of water quality throughout the distribution system taking into account:

- (i) the number of persons served;
- (ii) the different sources of water;
- (iii) the different treatment methods employed by the system; and
- (iv) seasonal variability.

Tap sampling under this section is not required to be conducted at taps targeted for lead and copper sampling under section 37(a) of this rule. (Note: Systems may find it convenient to conduct tap sampling for water quality parameters at sites used for coliform sampling under section 8 of this rule.)

(B) Except as provided in subsection (d)(3), a system shall collect two (2) samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in subsection

(c). Samples collected at the entry point to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one (1) source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (~~i.e.,~~ **that is** when water used is representative of all sources being used).

(2) Requirements for the number of samples shall be as follows:

(A) Systems shall collect two (2) tap samples for applicable water quality parameters during each monitoring period specified under subsections (c) through (f) from the number of sites listed in the following table:

System Size (Number of People Served)	Number of Sites for Water <u>Quality</u> <u>Parameters</u>
> 100,000	25
10,001 to 100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
< 101	1

(B) Systems shall collect two (2) samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in subsection (c). During each monitoring period specified in subsections (d) through (f), systems shall collect one (1) sample for each applicable water quality parameter at each entry point to the distribution system.

(c) This subsection governs initial sampling. All large water systems shall measure the

applicable water quality parameters as specified in subdivision (1) at taps and at each entry point to the distribution system during each six (6) month monitoring period specified in section 37(d)(1) of this rule. All small and medium size systems shall measure the applicable water quality parameters at the locations specified in subdivision (1) during each six (6) month monitoring period specified in section 37(d)(1) of this rule during which the system exceeds the lead or copper action level. **The following are water quality parameters:**

(1) Monitoring requirements for water quality parameters at taps are as follows:

- (A) pH.
- (B) Alkalinity.
- (C) Orthophosphate, when an inhibitor containing a phosphate compound is used.
- (D) Silica, when an inhibitor containing a silica compound is used.
- (E) Calcium.
- (F) Conductivity.
- (G) Water temperature.

(2) At each entry point to the distribution system, all of the applicable parameters listed in subdivision (1).

(d) This subsection governs monitoring after installation of corrosion control. Any large system which installs corrosion control treatment under section 40(d)(4) of this rule shall measure the water quality parameters at the locations and frequencies specified in this subsection during each six (6) month monitoring period specified in section 37(d)(2)(A) of this rule. Any small or medium size system which installs corrosion control treatment shall conduct monitoring during each six (6) month monitoring period specified in section 37(d)(2)(B) of this rule in which the system exceeds the lead or copper action level. **The following are water quality parameters:**

(1) Monitoring requirements for water quality parameters at taps are two (2) samples for:

- (A) pH;
- (B) alkalinity;
- (C) orthophosphate, when an inhibitor containing a phosphate compound is used;
- (D) silica, when an inhibitor containing a silicate compound is used; and
- (E) calcium, when calcium carbonate stabilization is used as part of corrosion control.

(2) ~~Monitoring requirements for water quality parameters~~ **Except as provided in subdivision (3),** at each entry point to the distribution system are one (1) sample **no less frequently than** every two (2) weeks (biweekly) for:

- (A) pH;
- (B) when alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity and the alkalinity concentration; and
- (C) when a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used and the concentration of the orthophosphate or silica (whichever is applicable).

(3) A ground water system can limit entry point sampling described in subdivision (2) to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the system must monitor for

water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Prior to the start of any monitoring under this subdivision, the system shall provide to the commissioner written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

(e) This subsection governs monitoring after water quality parameter values for optimal corrosion control are specified. After the commissioner specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under section 41(f) of this rule, all large water systems shall measure the applicable water quality parameters in accordance with subsection (d) ~~during each monitoring period specified in section 37(d)(3) of this rule~~ **and determine compliance with the requirements of section 42(g) of this rule every six (6) months with the first six (6) month period to begin on the date the commissioner specifies the optimal values under section 41(f) of this rule.** Any small or medium size system shall conduct such monitoring during each ~~monitoring six (6) month period specified in section 37(d)(3) of this rule~~ in which the system exceeds the lead or copper action level. ~~The system may take a confirmation sample for any water quality parameter value no later than three (3) days after the first sample. If a confirmation sample is taken, the result must be averaged with the first sampling result and the average must be used for any compliance determinations under section 41(g) of this rule. The commissioner has the discretion to delete results of obvious sampling errors from this calculation.~~ **For any such small and medium-size water system that is subject to a reduced monitoring frequency pursuant to section 37(d)(4) of this rule at the time of the action level exceedence, the end of the applicable six (6) month period shall coincide with the end of the applicable monitoring period under section 37(d)(4) of this rule. Compliance with commissioner-designated optimal water quality parameter values shall be determined as specified under section 41(g) of this rule.**

(f) The following are requirements for reduced monitoring:

(1) Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two (2) consecutive six (6) month monitoring periods under subsection (e) shall continue monitoring at the entry point to the distribution system as specified in subsection (d)(2). Such system may collect two (2) tap samples for applicable water quality parameters from the reduced number of sites shown in the following table during each six (6) month monitoring period:

System Size (Number of <u>People Served</u>)	Reduced Number of Sites of Water <u>Quality</u> <u>Parameters</u>
> 100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
< 101	1

(2) This section designates reduced monitoring requirements for water quality parameters as follows:

(A) Any water system that maintains the range of values for water quality parameters reflecting optimal corrosion control treatment specified by the commissioner under section 41(f) of this rule during three (3) consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (1) from once every six (6) months to annually. Any water system that maintains the range of water quality parameters reflecting optimal corrosion control treatment specified by the commissioner under section 41(f) of this rule during three (3) consecutive years of annual monitoring under this subdivision may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (1) from annually to once every three (3) years.

(B) A water system may reduce the frequency of collecting tap samples to every three (3) years for applicable water quality parameters specified in subdivision (1) if the system demonstrates the following during two (2) consecutive monitoring periods:

- (i) The systems tap water lead level at the ninetieth percentile is less than or equal to the PQL for lead as specified in section 45(b)(2) of this rule.**
- (ii) The systems tap water copper level at the ninetieth percentile is less than or equal to sixty-five hundredths (0.65) milligram per liter (mg/l) for copper as specified in section 36(c)(2) of this rule.**
- (iii) The system has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the commissioner under section 41(f) of this rule.**

(3) A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.

(4) Any water system subject to the reduced monitoring frequency that fails to operate **at or above the minimum value or** within the range of values for the water quality parameters specified by the commissioner under section 41(f) of this rule **for more than nine (9) days in**

any six (6) month monitoring period shall resume distribution tap water sampling in accordance with the number and frequency requirements in subsection (d) (e). Such a system may resume annual monitoring for water quality parameters number of sites specified in subdivision (2) after it has completed two (2) subsequent consecutive six (6) month rounds of monitoring that meet the criteria of that subsection or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites after it demonstrates that it meets the criteria of either subsection (f)(2)(A) or (f)(2)(B) .

(g) The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the commissioner in making any determinations (i.e., that is, determining concentrations of water quality parameters) under this section or section 41 of this rule. (*Water Pollution Control Board; 327 IAC 8-2-38; filed Aug 24, 1994, 8:15 a.m.: 18 IR 71; errata filed Oct 11, 1994, 2:45 p.m.: 18 IR 532; filed Oct 24, 1997, 4:30 p.m.: 21 IR 940*)

SECTION 3. 327 IAC 8-2-39 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-39 Monitoring requirements for lead and copper in source water

Authority: IC 13-1-3-4; IC 13-7-2-15; IC 13-7-7-5; IC 13-7-14-5

Affected: IC 13-7

Sec. 39. (a) Requirements for sample location, collection methods, and number of samples shall be as follows:

(1) A water system that fails to meet the lead or copper action level on the basis of tap samples collected in accordance with section 37 of this rule shall collect lead and copper source water samples in accordance with the **following** requirements regarding sample location, number of samples, and collection methods: ~~specified in section 4.1 of this rule (inorganic chemical sampling). (Note: The timing of sampling for lead and copper shall be in accordance with subsections (b) and (c), and not dates specified in section 4.1 of this rule.)~~

(A) Ground water systems shall take a minimum of one (1) sample at every entry point to the distribution system which is representative of each well after treatment hereafter called a sampling point. The system shall take one (1) sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(B) Surface water systems, or systems with a combination of ground and surface water sources, shall take a minimum of one (1) sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment hereafter called a sampling point. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(C) If a system draws water from more than one (1) source and the sources are combined before distribution, the system must sample at an entry point

to the distribution system during periods of normal operating conditions when water representative of all sources is being used.

(D) The commissioner may reduce the total number of samples that must be analyzed by allowing the use of compositing. Compositing of samples must be done by certified laboratory personnel. Composite samples from a maximum of five (5) samples are allowed, provided that if the lead concentration in the composite sample is greater than one-thousandth (0.001) milligram/ liter (mg/l) or the copper concentration is greater than one hundred sixty-thousandths (0.160) mg/l, then either of the following shall be done:

(i) A follow-up sample shall be taken and analyzed within fourteen (14) days at each sampling point used in the composite.

(ii) If duplicates of or sufficient quantities from the original samples from each sampling point used in the composite are available, the system may use these instead of resampling.

(2) Where the results of sampling indicate the maximum permissible source water levels established under section 42(b)(4) of this rule have been exceeded, the commissioner may require that one (1) additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two (2) weeks) at the same sampling point. If a confirmation sample required by the commissioner is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the maximum permissible levels specified by the commissioner. Any sample value below the detection limit shall be considered to be zero (0). Any value above the detection limit but below the practical quantitation level shall either be considered as the measured value or be considered one-half ($\frac{1}{2}$) the practical quantitation level.

(b) Any system ~~which~~ **that** exceeds the lead or copper action level at the tap shall collect one (1) source water sample from each entry point to the distribution system within six (6) months after the action level has been exceeded.

(c) Any system which installs source water treatment under STEP THREE of section 42(a) of this rule shall collect an additional source water sample from each entry point to the distribution system during two (2) consecutive six (6) month monitoring periods by the deadline specified in STEP FOUR of section 42(a) of this rule.

(d) Requirements for monitoring frequency after the commissioner specifies maximum permissible source water levels or determines that source water treatment is not needed shall be as follows:

(1) A system shall monitor at the frequency specified as follows in cases where the commissioner specifies maximum permissible source water levels under STEP FOUR of section 42(b) of this rule or determines that the system is not required to install source water treatment under STEP TWO of section 42(b) of this rule:

(A) A water system using only ground water shall collect samples once during the three (3) year compliance period (as that term is defined in section 1(10) of this rule) in effect when the applicable determination under this subdivision is made by

the commissioner. Such systems shall collect samples once during each subsequent compliance period.

(B) A water system using surface water (or a combination of surface and ground water) shall collect samples once during each year, the first annual monitoring period to begin on the date on which the applicable determination is made under this subdivision.

(2) A system is not required to conduct source water sampling for lead or copper, or both, if the system meets the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under subdivision (1).

(e) Requirements for reduced monitoring frequency shall be as follows:

(1) A water system using only ground water ~~which demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead or copper, or both, concentrations specified by the commissioner in STEP FOUR of section 42(b) of this rule during at least three (3) consecutive compliance periods under subsection (d)(1)~~ may reduce the monitoring frequency for lead ~~or and~~ copper, ~~or both~~, to once during each nine (9) year compliance cycle (as that term is defined in section 1(9) of this rule) **if the system meets one (1) of the following criterion:**

(A) The system demonstrates that the finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the commissioner in section 42(b)(4) of this rule during at least three (3) consecutive compliance periods under subsection (d)(1).

(B) The commissioner has determined that source water treatment is not needed and the system demonstrates that, during at least three (3) consecutive compliance periods in which sampling was conducted under subsection (d)(1), the concentration of lead in source water was less than or equal to five-thousandths (0.005) mg/l and the concentration of copper in source water was less than or equal to sixty-five hundredths (0.65) mg/l.

(2) A water system using surface water (or a combination of surface ~~water~~ and ground ~~waters~~ ~~which demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the commissioner in STEP FOUR of section 42(b) of this rule for at least three (3) consecutive years~~ **water**) may reduce the monitoring frequency in subsection (d)(1) to once during each nine (9) year compliance cycle (as that term is defined in section 1(9) of this rule) **if the system meets one (1) of the following criterion:**

(A) The system demonstrates that the finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the commissioner in section 42(b)(4) of this rule for at least three (3) consecutive years.

(B) The commissioner has determined that source water treatment is not needed and the system demonstrates that, during at least three (3) consecutive years, the concentration of lead in source water was less than or equal to five-thousandths (0.005)

mg/l and the concentration of copper in source water was less than or equal to sixty-five hundredths (0.65) mg/l.

(3) A water system that uses a new source of water is not eligible for reduced monitoring for lead or copper, or both, until concentrations in samples collected from the new source during three (3) consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the commissioner in STEP FIVE of section 42(a) of this rule.

(Water Pollution Control Board; 327 IAC 8-2-39; filed Aug 24, 1994, 8:15 a.m.: 18 IR 73; errata filed Oct 11, 1994, 2:45 p.m.: 18 IR 532)

SECTION 4. 327 IAC 8-2-40 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-40 Applicability of corrosion control treatment steps to small, medium size, and large water systems

Authority: IC 13-13-5; IC 13-14-8-7; IC 13-14-9; IC 13-18-3; IC 13-18-16

Affected: IC 13-18

Sec. 40. (a) Systems shall complete the applicable corrosion control treatment requirements described in section 41 of this rule by the deadlines established as follows:

(1) A large system (serving more than fifty thousand (50,000) persons) shall complete the corrosion control treatment steps specified in subsection (d) unless it is deemed to have optimized corrosion control under subsection (b)(2) or (b)(3).

(2) A small system (serving less than or equal to three thousand three hundred (3,300) persons) and a medium size system (serving more than three thousand three hundred (3,300) and less than or equal to fifty thousand (50,000) persons) shall complete the corrosion control treatment steps specified in subsection (e), unless it is deemed to have optimized corrosion control under subsection (b)(1), (b)(2), or (b)(3).

(b) A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this section if the system satisfies one (1) of the following criteria **in this subdivision. Any such system deemed to have optimized corrosion control and having treatment in place shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the commissioner determines appropriate to ensure optimal corrosion control treatment is maintained as follows:**

(1) A small or medium size water system is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two (2) consecutive six (6) month monitoring periods conducted in accordance with section 37 of this rule.

(2) Any water system may be deemed by the commissioner to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the commissioner that it has conducted activities equivalent to the corrosion control steps applicable to such system under this section. If the commissioner makes this determination, the commissioner shall provide the system with a written notice explaining the basis for the decision and shall specify water quality control parameters representing optimal corrosion control in accordance with section 41(f) of this rule. **A water system deemed to have optimized**

corrosion control shall operate in compliance with commissioner-designated water quality control parameters in accordance with section 41(g) of this rule and continue to conduct lead and copper tap and water quality parameter sampling in accordance with section 37 of this rule. A system shall provide the following

information to the commissioner in order to support a determination under this subsection:

(A) The results of all test samples collected for each of the water quality parameters in section 41(c)(3) of this rule.

(B) A report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in section 42(c)(1) of this rule, the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment.

(C) A report explaining how corrosion control has been installed and how it is being maintained to ensure minimal lead and copper concentrations at consumers' taps.

(D) The results of tap water samples collected in accordance with section 37 of this rule at least once every six (6) months for one (1) year after corrosion control has been installed.

(3) Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring in accordance with section 37 of this rule and source water monitoring conducted in accordance with section 39 of this rule that demonstrates for two (2) consecutive six (6) month periods that the difference between the ninetieth percentile tap water lead level computed under section 36(c)(3) of this rule and the highest source water lead concentration is less than the practical quantitation level for lead specified in section 45(a)(1)(B) of this rule. **Criteria for optimal corrosion control are as follows:**

(A) **A water system whose highest source water lead level is below the method detection limit may also be deemed to have optimized corrosion control if the ninetieth percentile tap water lead level is less than or equal to the practical quantitation level for lead for two (2) consecutive six (6) month monitoring periods.**

(B) **A water system deemed to have optimized corrosion control shall continue monitoring for lead and copper at the tap no less frequently than once every three (3) calendar years using the reduced number of sites specified in section 37(c) of this rule and collecting the samples at times and locations specified in section 37(d)(4)(D) of this rule.**

(C) **A water system deemed to have optimized corrosion control shall notify the commissioner in writing pursuant to section 46(c) of this rule of any change in treatment or the addition of a new source. The commissioner may require any such system to conduct additional monitoring or to take other action the commissioner deems appropriate to ensure that such systems maintain minimal levels of corrosion in the distribution system.**

(D) **On or after July 12, 2001, a system that is deemed not to have optimized corrosion control shall implement corrosion control treatment pursuant to this section unless it meets the copper action level.**

(E) **Any system triggered into corrosion control because it is no longer deemed to have optimized corrosion control shall implement corrosion**

control treatment in accordance with the deadlines in subsection (e). Any such large system shall adhere to the schedule specified for medium size systems, with the time periods for completing each step being triggered by the date the system is no longer deemed to have optimized corrosion control.

(c) Any small or medium size system that is required to complete the corrosion control steps due to its exceeding the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two (2) consecutive monitoring periods conducted under section 37 of this rule and submits the results to the commissioner. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system (or the commissioner, as the case may be) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety. The commissioner may require a system to repeat treatment steps previously completed by the system where it has been determined by the commissioner that this is necessary to implement properly the treatment requirements of this section. The commissioner shall notify the system in writing of such a determination and explain the basis for the decision. The requirement for any small or medium size water system to implement corrosion control treatment steps in accordance with subsection (e) (including systems deemed to have optimized corrosion control under subsection (b)(1)) is triggered whenever any small or medium size water system exceeds the lead or copper action level.

(d) Except as provided in subsection (b)(2) and (b)(3), large systems shall complete the following corrosion control treatment steps (described in the referenced portions of sections 37, 38, and 41 of this rule) by the indicated dates:

STEP ONE: The system shall conduct initial monitoring (as required by sections 37(d)(1) and 38(c) of this rule) during two (2) consecutive six (6) month monitoring periods by January 1, 1993.

STEP TWO: The system shall complete corrosion control studies (as required by section 41(c) of this rule) by July 1, 1994.

STEP THREE: The commissioner shall designate optimal corrosion control treatment (as required by section 41(d) of this rule) by January 1, 1995.

STEP FOUR: The system shall install optimal corrosion control treatment (as required by section 41(e) of this rule) by January 1, 1997.

STEP FIVE: The system shall complete follow-up sampling (as required by sections 37(e) and 38(d) of this rule) by January 1, 1998.

STEP SIX: The commissioner shall review installation of treatment and designate optimal water quality control parameters (as required by section 41(f) of this rule) by July 1, 1998.

STEP SEVEN: The system shall operate in compliance with the optimal water quality control parameters specified by the commissioner (as required by section 41(g) of this rule) and continue to conduct tap sampling (as required by sections 37(d)(3) and 38(e) of this rule).

(e) Except as provided in subsection (b), small and medium size systems shall complete the following corrosion control treatment steps by the indicated time periods:

STEP ONE: The system shall conduct initial tap sampling until the system either exceeds

the lead and copper action level or becomes eligible for reduced monitoring under section 37(d)(4) of this rule. A system exceeding the lead or copper action level shall recommend optimal corrosion control treatment within six (6) months after it exceeds one (1) of the action levels.

STEP TWO: Within twelve (12) months after a system exceeds the lead or copper action level, the commissioner may require the system to perform corrosion control studies. If the commissioner does not require the system to perform such studies, optimal corrosion control treatment shall be specified by the commissioner within the following time frames:

(A) For medium size systems, within eighteen (18) months after such system exceeds the lead or copper action level.

(B) For small systems, within twenty-four (24) months after such system exceeds the lead or copper action level.

STEP THREE: If the commissioner requires a system to perform corrosion control studies under STEP TWO, the system shall complete the studies within eighteen (18) months after the commissioner requires that such studies be conducted.

STEP FOUR: If the system has performed corrosion control studies under STEP TWO, the commissioner shall designate optimal corrosion control treatment within six (6) months after completion of STEP THREE.

STEP FIVE: The system shall install optimal corrosion control treatment within twenty-four (24) months after the commissioner designates optimal corrosion control treatment.

STEP SIX: The system shall complete follow-up sampling within thirty-six (36) months after the commissioner designates optimal corrosion control treatment.

STEP SEVEN: The commissioner shall review the system's installation of treatment and designate optimal water quality control parameters within six (6) months after completion of STEP SIX.

STEP EIGHT: The system shall operate in compliance with the optimal water quality control parameters designated by the commissioner and continue to conduct tap sampling.

(Water Pollution Control Board; 327 IAC 8-2-40; filed Aug 24, 1994, 8:15 a.m.: 18 IR 74; filed Oct 24, 1997, 4:30 p.m.: 21 IR 942)

SECTION 5. 327 IAC 8-2-41 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-41 Corrosion control treatment

Authority: IC 13-1-3-4; IC 13-7-2-15; IC 13-7-7-5; IC 13-7-14-5

Affected: IC 13-7

Sec. 41. (a) Each system shall complete the corrosion control treatment requirements described in this section ~~which that~~ are applicable to such system under section 40 of this rule. Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium size water systems exceeding the lead or copper action level shall recommend installation of one (1) or more of the corrosion control treatments listed in subsection (c)(1) ~~which that~~ the system believes constitutes optimal corrosion control for that system. The commissioner may require the system to conduct additional water quality parameter monitoring in accordance with section 38(c) of this rule to assist the commissioner in reviewing the system's recommendation.

(b) The commissioner may require any small or medium size system that exceeds the lead or copper action level to perform corrosion control studies under subsection (c) to identify optimal corrosion control treatment for the system.

(c) Requirements for the performance of corrosion control studies shall be as follows:

(1) Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:

(A) Alkalinity and pH adjustment.

(B) Calcium hardness adjustment.

(C) The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

(2) The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on analogous treatments with other systems of similar size, water chemistry, and distribution system configuration.

(3) The water system shall measure the following water quality parameters in any tests conducted under subdivision (2) before and after evaluating the corrosion control treatments listed in subdivision (1):

(A) Lead.

(B) Copper.

(C) pH.

(D) Alkalinity.

(E) Calcium.

(F) Conductivity.

(G) Orthophosphate (when an inhibitor containing a phosphate compound is used).

(H) Silicate (when an inhibitor containing a silicate compound is used).

(I) Water temperature.

(4) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one (1) of the following:

(A) Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality and characteristics.

(B) Data and documentation demonstrating that a water system has previously attempted to evaluate a particular corrosion control treatment and has found the treatment is ineffective or adversely affects other water quality treatment processes, or both.

(5) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.

(6) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the commissioner in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all

supporting documentation specified in subdivisions (1) through (5).

(d) Requirements for the designation of optimal corrosion control treatment shall be as follows:

(1) Based upon consideration of available information including, where applicable, studies performed under subsection (c) and a system's recommended treatment alternative, the commissioner shall either approve the corrosion control treatment option recommended by the system or designate alternative corrosion control treatments from among those listed in subsection (c)(1). When designating optimal treatment, the commissioner shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes.

(2) The commissioner shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the commissioner requests additional information to aid the review, the water system shall provide the information.

(e) Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the commissioner under subsection (d).

(f) The commissioner shall evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the water system and determine whether the system has properly installed and operated the optimal corrosion control treatment designated by the commissioner in subsection (d). Upon reviewing the results of tap water and water quality parameter monitoring by the system, both before and after the system installs optimal corrosion control treatment, the commissioner shall designate the following:

(1) A minimum value or range of values for pH measured at each entry point to the distribution system.

(2) A minimum pH value, measured in all tap samples. Such value shall be equal to or greater than seven (7.0) unless the commissioner determines that meeting a pH level of seven (7.0) is not technologically feasible or is not necessary for the system to optimize corrosion control.

(3) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the commissioner determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system.

(4) If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity measured at each entry point to the distribution system and in all tap samples.

(5) If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium measured in all tap samples.

The values for the applicable water quality control parameters listed in this subsection shall be those the commissioner determines to reflect optimal corrosion control treatment for the system. The commissioner may designate values for additional water quality control parameters determined by the commissioner to reflect optimal corrosion control for the system. The commissioner shall notify the system in writing of these determinations and explain the basis for

the decisions.

(g) All systems **optimizing corrosion control** shall **continue to operate and maintain optimal corrosion control treatment, including maintaining** water quality parameter values at or above minimum values or within ranges designated by the commissioner under subsection (f) in ~~each sample~~ **all samples** collected under section 38(e) **38(d) through 38(f)** of this rule. ~~If the water quality parameter value of any sample is below the minimum value or outside the range designated by the commissioner, then the system is out of Compliance with this subsection. the requirements shall be determined every six (6) months, as specified in section 38(e) 38(d) of this rule. the~~ **A water system may take a confirmation sample for any water quality parameter value no later than three (3) days after the first sample. If a confirmation sample is taken, the result must be averaged with the first sampling result and the average must be used for any compliance determinations under this subsection. is out of compliance with the requirements for a six (6) month period if it has excursions for any commissioner-specified parameter for more than nine (9) days during the period. An excursion occurs whenever the daily value for one (1) or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the commissioner. The commissioner may has the discretion to delete results of obvious sampling errors from this calculation. Daily values are calculated as follows:**

(1) On days when more than one (1) measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both.

(2) On days when only one (1) measurement for the water quality parameter is collected at the sampling location, the daily value shall be the results of that measurement.

(3) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

(h) Upon its own initiative or in response to a request by a water system or other interested party, the commissioner may modify its determination of the optimal corrosion control treatment under subsection (d) or optimal water quality control parameters under subsection (f). A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The commissioner may modify the determination where the commissioner concludes that such change is necessary to ensure that the system continues to optimize corrosion control treatment. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the commissioner's decision, and provide an implementation schedule for completing the treatment modifications. (*Water Pollution Control Board; 327 IAC 8-2-41; filed Aug 24, 1994, 8:15 a.m.: 18 IR 75*)

SECTION 6. 327 IAC 8-2-43 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-43 Lead service line replacement

Authority: IC 13-13-5; IC 13-14-8-7; IC 13-14-9; IC 13-18-3; IC 13-18-16
Affected: IC 13-18

Sec. 43. (a) Systems that fail to meet the lead action level in tap samples taken under section 37(d)(2) of this rule, after installing corrosion control treatment or source water treatment, or both (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of this section. If a system is in violation of section 40 or 42 of this rule for failure to install source water or corrosion control treatment, the commissioner may require the system to commence lead service line replacement under this section after the date by which the system was required to conduct monitoring under section 37(d)(2) of this rule has passed.

(b) A system shall replace annually at least seven percent (7%) of the initial number of lead service lines in **its distribution system. The initial number of lead service lines is the number of lead service lines in place at the time the replacement program begins.** The system shall identify the initial number of lead service lines in its distribution system, **including an identification of the portion or portions owned by the system,** based upon a materials evaluation, including the evaluation required under section 37(a) of this rule **and relevant legal authorities, for example, to contracts and local ordinances, regarding the portion owned by the system.** The first year of lead service line replacement shall begin on the date the action level was exceeded in tap sampling referenced in subsection (a).

(c) A system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken under section 37(b)(3) of this rule, is less than or equal to fifteen-thousandths (0.015) milligram per liter.

(d) A water system shall replace ~~the entire service line (up to the building inlet) unless it demonstrates to the satisfaction of the commissioner under subsection (e) that it controls less than the entire service line. In such cases, the system shall replace the portion of the line which the commissioner determines is under the system's control.~~ **that portion of the lead service line that it owns. In cases where the system does not own the entire lead service line,** the system shall notify the ~~user served by owner of~~ the line, **or the owner's authorized agent,** that the system will replace the portion of the service line ~~under its control that it owns~~ and shall offer to replace the ~~building owner's~~ **privately-owned** portion of the line. ~~For buildings where only a portion of the line is replaced, the water system shall inform the residents that the system will collect a first flush tap water sample after partial replacement of the service line is completed if the residents so desire. In cases where the residents accept the offer, the system shall collect the sample and report the results to the residents within fourteen (14) days following partial lead service line replacement.~~ **nor is it required to replace the privately-owned portion of the line where the owner chooses not to pay the cost of replacing the privately-owned portion of the line, or where replacing the privately-owned portion of the line would be precluded by state, local, or common law. A water system that does not replace the entire length of the service line also shall complete the following:**

(1) At least forty-five (45) days prior to commencing with the partial replacement of a lead service line, the water system shall provide notice to the resident or residents

of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The commissioner may allow the water system to provide notice less than forty-five (45) days prior to commencing partial lead service line replacement where such replacement is in conduction with emergency repairs. In addition, the water system shall inform the resident or residents served by the line that the system will, at the system's expense, collect a sample from each partially-replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed under section 37(b)(3) of this rule, within seventy-two (72) hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner and the resident or residents served by the line within three (3) business days of receiving the results. Mailed notices postmarked within three (3) business days of receiving the result shall be considered on time.

(2) The water system shall provide the information required by this subsection to the residents of individual dwellings by mail or other methods approved by the commissioner. In instances where multi-family dwellings are served by the line, the water system shall have the option to post the information at a conspicuous location.

~~(c) A water system is presumed to control the entire lead service line (up to the building inlet) unless the system demonstrates to the satisfaction of the commissioner, in a letter submitted under section 46(e)(4) of this rule that it does not have any of the following forms of control over the entire line (as defined by state statutes, municipal ordinances, public service contracts, or other applicable legal authority):~~

~~(1) Authority to set standards for construction, repair, or maintenance of the line.~~

~~(2) Authority to replace, repair, or maintain the service line.~~

~~(3) Ownership of the service line.~~

~~The commissioner shall review the information supplied by the system and determine whether the system controls less than the entire service line and, in such cases, shall determine the extent of the system's control. The commissioner's determination shall be in writing and explain the basis for the decision.~~

(f) (e) The commissioner may require a system to replace lead service lines on a shorter schedule than that required by this section, taking into account the number of lead service lines in the system, where a shorter replacement schedule is feasible. The commissioner shall make this determination in writing and notify the system of the determination within six (6) months after the system is triggered into lead service line replacement based on monitoring referenced in subsection (a).

(f) (f) Any system may cease replacing lead service lines whenever first draw samples collected under section 37(d)(3) of this rule meet the lead action level during each of two (2) consecutive monitoring periods and the system submits the results to the commissioner. If the lead tap samples in any such water system thereafter exceeds the lead action level, the system shall recommence replacing lead service lines under subsection (b).

~~(h)~~ (g) To demonstrate compliance with subsections (a) through (d), a system shall report to the commissioner the information specified in section 46(e) of this rule. (*Water Pollution Control Board; 327 IAC 8-2-43; filed Aug 24, 1994, 8:15 a.m.: 18 IR 78; filed Oct 24, 1997, 4:30 p.m.: 21 IR 944*)

SECTION 7. 327 IAC 8-2-44 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-44 Public education and supplemental monitoring; lead and copper

Authority: IC 13-1-3-4; IC 13-7-2-15; IC 13-7-7-5; IC 13-7-14-5

Affected: IC 13-7

Sec. 44. (a) A water system that exceeds the lead action level based on tap water samples collected in accordance with section 37 of this rule shall deliver the public education materials contained in ~~subsections~~ **this subsection and subsection (b) and (c)** in accordance with the requirements in subsection ~~(d)~~. (c).

~~(b)~~ (1) A **community** water system shall include the text as established in this ~~subsection~~ **subdivision** in all the printed materials it distributes through its lead public education program. **A system may delete information pertaining to lead service lines, upon approval of the commissioner, if no lead service lines exist anywhere in the water system service area. Public education language at clause (D)(ii)(EE) and (D)(iv)(BB) may be modified regarding building permit record availability and consumer access to these records, if approved by the commissioner. A system may also continue to use preprinted public education materials that meet previous versions of this rule.** Any additional information presented by a system shall be consistent with the following information and be in plain English that can be understood by lay persons:

~~(1) Introduction.~~ (A) The Indiana department of environmental management (IDEM) and (insert name of water supplier) are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the action level of fifteen (15) parts per billion or fifteen-thousandths (0.015) milligram of lead per liter of water. Under state law, we are required to have a program in place to minimize lead in your drinking water by (insert date when corrosion control will be completed for your system). This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace each lead service line that we control if the line contributes lead concentrations of more than fifteen (15) parts per billion after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation, please give us a call at (insert water systems phone number). This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

~~(2) Health effects of lead.~~ (B) Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain, and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. The greatest

risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development in growing bodies. In addition, a child at play often comes in contact with sources of lead contamination, like dirt and dust, that rarely affect an adult. It is important to wash children's hands and toys often, and try to make sure they only put food in their mouths.

(3) (C) The following are requirements for lead in drinking water:

(A) (i) Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up twenty percent (20%) or more of a person's total exposure to lead.

(B) (ii) Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than two-tenths percent (0.2%) lead and restricted the lead content of faucets, pipes, and other plumbing material to eight percent (8%).

(C) (iii) When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

(4) (D) The following are steps you can take in the home to reduce exposure to lead in drinking water:

(A) (i) Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains high concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call (insert phone number of water system).

(B) (ii) If a water test indicates that the drinking water drawn from a tap in your home contains lead above fifteen (15) parts per billion, then you should take the following precautions:

(1) (AA) Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six (6) hours. The longer the water resides in your home's

plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about fifteen (15) to thirty (30) seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one (1) minute, before drinking.

Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking.

Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one (1) or two (2) gallons of water and costs less than (insert a cost estimate based on two (2) times a day for thirty (30) days) per month. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more and sometimes longer pipes than in smaller buildings. Ask your landlord for help in finding the source of lead and for advice on reducing the lead level.

(ii) **(BB)** Try not to cook with or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw it from the cold tap and heat it on the stove.

(iii) **(CC)** Remove loose lead solder and debris from the plumbing materials in newly constructed homes, or homes where the plumbing has been recently replaced, by removing the faucet strainers from all taps and running the water for three (3) to five (5) minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

(iv) **(DD)** If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, contact the plumber who did the work and request that he or she replace the solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify the Indiana department of environmental management about the violation.

(v) **(EE)** Determine whether the service line that connects your home or apartment to the water main is made of lead. The best way to determine ~~this if your service line is made of lead is to hire by~~ **either hiring** a licensed plumber to inspect the line or by contacting the plumbing contractor ~~that who~~ **who** installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be kept in the files of (insert the department that handles building permits). A licensed plumber can, at the same time, check to see if your home's plumbing contains

lead solder, lead pipes, or **pipe** fittings that contain lead. The public water system that delivers the water to your home should also maintain records of the materials **located** in the distribution system. If the service line that connects your dwelling to the water main contributes more than fifteen (15) parts per billion to drinking water, after our comprehensive treatment program is in place, we are required to replace the line. If the line is only partially ~~controlled~~ **owned** by the (insert name of the water system that ~~controls~~ **owns** the line), we are required to provide ~~you~~ **the owner of the privately-owned portion of the line** with information on how to replace ~~your~~ **the privately-owned** portion of the service line, **and** offer to replace that portion of the line at **the owner's** ~~your~~ expense **and. If we replace only the portion of the line that we own, we are also required to notify you in advance and provide you with information on the steps you can take to minimize exposure to any temporary increase in lead levels that may result from the partial replacement, to** take a follow-up tap water sample within ~~fourteen (14) days~~ **seventy-two (72) hours** of the **partial** replacement, **and to mail or otherwise provide you with the results of that sample within three (3) business days of receiving the results.** Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

~~(vi)~~ **(FF)** Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine whether your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself, because improper wiring can cause electrical shock and fire hazards.

~~(E)~~ **(iii)** The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead in excess of fifteen (15) parts per billion after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

~~(i)~~ **(AA)** Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap, however, all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit.

~~(ii)~~ **(BB)** Purchase bottled water for drinking and cooking.

~~(D)~~ **(iv)** You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and

provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

- (i) **(AA)** (insert the name of city or county department of public utilities) at (insert phone number) can provide you with information about your community's water supply and a list of local laboratories that have been certified by the state for testing water quality;
- (ii) **(BB)** (insert the name of city or county department that issues building permits) at (insert phone number) can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and
- (iii) **(CC)** (insert name of the state department of public health) at (insert phone number) or the (insert the name of the city or county health department) at (insert phone number) can provide you with information about the health effects of lead and how you can have your child's blood tested.

~~(E)~~ **(v)** The following is a list of some state approved laboratories in your area that you can call to have your water tested for lead. (Insert names and addresses of at least two (2) laboratories.)

(2) A nontransient noncommunity water system shall either include the text specified in subdivision (1) or shall include the following text in all of the printed materials it distributes through its public education program. Water systems may delete information pertaining to lead service lines upon approval of the commissioner if no lead service lines exist anywhere in the water system service area. Any additional information presented by a system shall be in plain English that can be easily understood and is consistent with the following information:

(A) The Indiana department of environmental management (IDEM) and (insert name of water supplier) are concerned about lead in your drinking water. Some drinking water samples taken from this facility have lead levels above the action level of fifteen (15) parts per billion (ppb), or fifteen-thousandths (0.015) milligram per liter (mg/l). Under state law, we are required to have a program in place to minimize lead in your drinking water by (insert date when corrosion control will be completed for your system). This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we own if the line contributes more than fifteen (15) ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation, please give us a call at (insert water system's phone number). This brochure explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

(B) Lead is found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. The greatest risk is to

young children and pregnant women. Amounts of lead that would not hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination, like dirt and dust, that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

(C) The following explains lead contamination in drinking water:

- (i) Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up twenty percent (20%) or more of a person's total exposure to lead.
- (ii) Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to water mains (service lines). In 1986, Congress banned the use of lead solder containing greater than two-tenths percent (0.2%) lead, and restricted the lead content of faucets, pipes, and other plumbing materials to eight and zero-tenths percent (8.0%).
- (iii) When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first draw water drawn from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

(D) The following are steps you can take to reduce exposure to lead in drinking water:

- (i) Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six (6) hours. The longer water resides in plumbing the more lead it may contain. Flushing the tap means running the cold water faucet for about fifteen (15) to thirty (30) seconds. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one (1) gallon of water.
- (ii) Do not cook with or drink water from the hot water tap. Hot water can dissolve lead more quickly than cold water. If you need hot water, draw water from the cold water tap and then heat it.
- (iii) The steps described in items (i) and (ii) will reduce the lead

concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.

(iv) You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

State and local government agencies that can be contacted include:

(AA) (insert name or title of facility official if appropriate) at (insert phone number) can provide you with information about your facility's water supply; and

(BB) (insert name or the Indiana department of health) at (insert phone number) or (insert the name of the city or county health department) at (insert phone number) can provide you with information about the health effects of lead.

(c) (b) A water system shall include the following information in all public service announcements submitted under its lead public education program to television and radio stations for broadcasting:

(1) Why should everyone want to know the facts about lead and drinking water? Because unhealthy amounts of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for (insert free or cost in dollars per sample). You can contact the (insert the name of the city or water system) for information on testing and on simple ways to reduce your exposure to lead in drinking water.

(2) To have your water tested for lead or to get more information about this public health concern, please call (insert the phone number of the city or water system).

(d) (c) Requirements for delivery of a public education program shall be as follows:

(1) In communities where a significant portion of the population speaks a language other than English, public education materials shall be communicated in the appropriate language.

(2) A community water system that ~~fails to meet~~ **exceeds** the lead action level on the basis of tap water samples collected in accordance with section 37 of this rule, **and that is not already repeating public education pursuant to subdivision (3), (7), or (8)**, shall, within sixty (60) days, do the following:

(A) Insert ~~policies~~ **notices** in each customer's water utility bill containing the information in subsection (b) (a)(1), along with the following alert on the water bill itself in large print: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION." **A community water system that has a billing cycle that does not include a billing within sixty (60) days of exceeding the action level, or that cannot insert information in the water utility bill without making major changes to its billing system, may use a separate mailing to deliver the information in subsection (a)(1) as**

long as the information is delivered to each customer within sixty (60) days of exceeding the action level. Such water systems shall also include the alert language specified in this clause.

(B) Submit the information in subsection ~~(b)~~ **(a)(1)** to the editorial department **or departments** of the major daily and weekly newspapers circulated throughout the community.

(C) Deliver pamphlets or brochures, or both, that contain the public education materials in subsection ~~(b)(2) and (b)(4)~~ **(a)(1)(B) and (a)(1)(D)** to facilities and organizations, including the following:

- (i) Public schools and local school boards.
- (ii) City or county health department.
- (iii) Women, infants, and children and head start programs, whenever available.
- (iv) Public or private hospitals and clinics.
- (v) Pediatricians.
- (vi) Family planning clinics.
- (vii) Local welfare agencies.

(D) Submit the public service announcement in subsection (c) to at least five (5) of the radio and television stations with the largest audiences that broadcast to the community served by the water system.

(3) A community water supply system shall repeat the tasks contained in subdivision (2)(A) through (2)(C) every twelve (12) months, and the tasks contained in subdivision (2)(D) every six (6) months for as long as the system exceeds the lead action level.

(4) Within sixty (60) days after it exceeds the lead action level, **unless it is already repeating public education tasks pursuant to subdivision (5)**, a nontransient noncommunity water system shall deliver the public education materials contained in subsection ~~(b)(1), (b)(2), and (b)(4)~~ **(a)(1) or (a)(2)** as follows:

- (A) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system.
- (B) Distribute informational pamphlets or brochures, or both, on lead in drinking water to each person served by the nontransient noncommunity water system.

The commissioner may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.

(5) A nontransient noncommunity water system shall repeat the tasks contained in subdivision (4) at least once during each calendar year in which the system exceeds the lead action level.

(6) A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six (6) month monitoring period conducted under section 37 of this rule. Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.

(7) A community water system may apply to the commissioner, in writing, to use the text specified in subsection (a)(2) in lieu of the text in subsection (a)(1) and to perform the tasks listed in subdivision (4) and (5) in lieu of the tasks in subdivision (2) and (3) if the following conditions are met:

(A) The system provides water as part of the costs of services provided and does not separately charge for water consumption.

(B) A community water system serving three thousand three hundred (3,300) or fewer people may omit the task contained in subdivision (2)(D). As long as the information contained in subsection (a)(1) to every household served by the system, such systems may further limit their public education program as follows:

(i) Systems serving five hundred (500) or fewer people may omit the requirement in subdivision (2)(B). Such a system may limit the distribution of the public education materials required under subdivision (2)(C) to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children, unless it is notified by the commissioner in writing that it must make a broader distribution.

(ii) If approved by the commissioner in writing, a system serving five hundred one (501) to three thousand three hundred (3,300) people may omit the requirement of subdivision (2)(B) or may limit the distribution of the public education materials required under subdivision (2)(C), or both, to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.

(C) A community water system serving three-thousand three hundred (3,300) or fewer people that delivers public education in accordance with clause (A) shall repeat the required public education tasks at least once during each calendar year in which the system exceeds the lead action level.

~~(e)~~ (d) A water system that fails to meet the lead action level on the basis of tap samples collected in accordance with section 37 of this rule shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample, and the system is not required to collect and analyze the sample itself. (*Water Pollution Control Board; 327 IAC 8-2-44; filed Aug 24, 1994, 8:15 a.m.: 18 IR 79; errata filed Oct 11, 1994, 2:45 p.m.: 18 IR 532*)

SECTION 8. 327 IAC 8-2-46 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-46 Reporting requirements; lead and copper

Authority: IC 13-13-5; IC 13-14-8-7; IC 13-14-9; IC 13-18-3; IC 13-18-16

Affected: IC 13-18

Sec. 46. (a) Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring shall be as follows:

(1) **Except as provided in clause (G)**, a water system shall report the following information for all tap water samples within the first ten (10) days following the end of each applicable monitoring period specified in sections 37 and 38 of this rule, **that is**, every six (6) months, annually, ~~or every three (3) years~~, **or every nine (9) years**:

(A) The results of all tap samples for lead and copper, including the location of each site and the criteria under section 37(a)(3) through 37(a)(7) of this rule, or any under which the site was selected for the system's sampling pool.

~~(B) A certification that each first draw sample collected by the water system is one (1) liter in volume and, to the best of their knowledge, has stood motionless in the service line, or in the interior plumbing of a sampling site, for at least six (6) hours.~~

Documentation for each tap water lead or copper sample for which the system requests an invalidation pursuant to section 37(f)(2) of this rule.

~~(C) Where residents collected samples, a certification that each tap sample collected by the residents was taken after the water system informed them of proper sampling procedures specified in section 37(b)(2) of this rule.~~

~~(D)~~ (C) The ninetieth percentile lead and copper concentrations measured from among all lead and copper tap samples collected during each monitoring period (calculated in accordance with section 36(c)(3) of this rule **unless the commissioner calculates the system's ninetieth percentile lead and copper levels under subsection (h).**

~~(E)~~ (D) With the exception of initial tap sampling conducted under section 37(d)(1) of this rule, the system shall designate any site which was not sampled during previous monitoring periods and include an explanation of why sampling sites have changed.

~~(F)~~ (E) The results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under section 38(c) through 38(f) of this rule.

~~(G)~~ (F) The results of all samples collected at the entry point to the distribution system for applicable water quality parameters under section 38(c) through 38(f) of this rule.

(G) A water system shall report the results of all water quality parameter samples collected under section 38(c) through 38(f) of this rule during each six (6) month monitoring period specified in section 38(d) of this rule within the first ten (10) days following the end of the monitoring period unless the commissioner has specified a more frequent reporting requirement.

~~(2) By the applicable date in section 37(d)(1) of this rule for commencement of monitoring, each community water system which does not complete its targeted sampling pool with tier one (1) sampling sites meeting the criteria in section 37(a)(3) of this rule shall send a letter to the commissioner justifying its selection of tier two (2) or tier three (3) sampling sites, or both, under section 37(a)(4) or 37(a)(5) of this rule, or both.~~

~~(3) By the applicable date in section 37(d)(1) of this rule for commencement of monitoring, each nontransient noncommunity water system which does not complete its sampling pool with tier one (1) sampling sites meeting the criteria in section 37(a)(6) of this rule shall send a letter to the commissioner justifying its selection of sampling sites under section 37(a)(7) of this rule.~~

~~(4) By the applicable date in section 37(d)(1) of this rule for commencement of monitoring, each water system with lead service lines that is not able to locate the number~~

~~of sites served by such lines required under section 37(a)(9) of this rule shall send a letter to the commissioner demonstrating why it was unable to locate a sufficient number of sites based on the information listed in section 37(a)(2) of this rule.~~

(2) For a nontransient noncommunity water system or a community water system meeting the criteria of section 44(c)(7)(A) and 44(c)(7)(B) of this rule, that does not have enough taps that can provide first-draw samples, the system must do either of the following:

(A) Provide written documentation to the commissioner identifying standing times and locations for enough nonfirst-draw samples to make up its sampling pool under section 37(b)(5) of this rule by the start of the first applicable monitoring period under section 37(d) of this rule that commences after April 11, 2000, unless the commissioner has waived prior approval of nonfirst-draw sample sites selected by the system pursuant to section 37(b)(5) of this rule.

(B) If the commissioner has waived prior approval of nonfirst-draw sample sites selected by the system, identify, in writing, each site that did not meet the six (6) hour minimum standing time and the length of the standing time for that particular substitute sample collected pursuant to section 37(b)(5) of this rule and include this information with the lead and copper tap sample results required to be submitted pursuant to subdivision (1)(A).

(3) No later than sixty (60) days after the addition of a new source or any change in water treatment unless the commissioner requires earlier notification, a water system deemed to have optimized corrosion control under section 40(b)(3) of this rule, a water system subject to reduced monitoring pursuant to section 37(d)(4) of this rule, or a water system subject to a monitoring waiver pursuant to section 37(g) of this rule, shall send written documentation to the commissioner describing the change. In those instances where prior approval by the commissioner of the treatment change or new source is not required, water systems are encouraged to provide the notification to the commissioner beforehand to minimize the risk the treatment change or new source will adversely affect optimal corrosion control.

(4) Any small system applying for a monitoring waiver under section 37(g) of this rule, or subject to a waiver granted pursuant to section 37(g)(3) of this rule, shall provide the following information to the commissioner in writing by the specified deadline:

(A) By the start of the first applicable monitoring period in section 37(d) of this rule, any small water system applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of section 37(g)(1) and 37(g)(2) of this rule.

(B) No later than nine (9) years after the monitoring previously conducted pursuant to section 37(g)(2) or 37(g)(4)(A) of this rule, each small system desiring to maintain its monitoring waiver shall provide the information required by section 37(g)(4)(A) and 37(g)(B).

(C) No later than sixty (60) days after it becomes aware that it is no longer free of lead or copper containing materials, or both, each small system with a

monitoring waiver shall provide written notification to the commissioner, setting forth the circumstances resulting in the lead or copper containing materials or both, being introduced into the system and what corrective action, if any, the system plans to remove these materials.

(D) By October 10, 2000, any small system with a waiver granted prior to April 11, 2000, and that has not previously met the requirements of section 37(g)(2) of this rule shall provide the information required.

(5) Each ground water system that requests that the commissioner reduce the number and frequency of sampling limits water quality parameter monitoring to a subset of entry points under section 38(d)(3) of this rule shall provide, the information required under section 37(d)(4) of this rule: by the commencement of such monitoring, written correspondence to the commissioner that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

(b) Source water monitoring reporting requirements shall be as follows:

(1) A water system shall report the sampling results for all source water samples collected in accordance with section 39 of this rule within the first ten (10) days following the end of each source water monitoring period (~~i.e.,~~ **that is,** annually, per compliance period, per compliance cycle), specified in section 39 of this rule.

(2) With the exception of the first round of source water sampling conducted under section 39(b) of this rule, the system shall specify any site which was not sampled during previous monitoring periods and include an explanation of why the sampling point has changed.

(c) This subsection establishes requirements for corrosion control treatment reporting. By the applicable dates under section 40 of this rule, systems shall report the following information:

(1) For systems demonstrating that they already have optimized corrosion control, information required in section 40(b)(2) or 40(b)(3) of this rule.

(2) For systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under section 41(a) of this rule.

(3) For systems required to evaluate the effectiveness of corrosion control treatments under section 41(c) of this rule, the information required under that subsection.

(4) For systems required to install optimal corrosion control designated by the commissioner under section 41(d) of this rule, a letter certifying that the system has completed installing that treatment.

(d) This subsection establishes requirements for source water treatment reporting. By the applicable dates in section 42 of this rule, systems shall provide the following information to the commissioner:

(1) If required under section 42(b)(1) of this rule, their recommendation regarding source water treatment.

(2) For systems required to install source water treatment under section 42(b)(2) of this rule, a letter certifying that the system has completed installing the treatment designated by the commissioner within twenty-four (24) months after the commissioner designated the

treatment.

(e) This subsection establishes requirements for lead service line replacement reporting. Systems shall report the following information to the commissioner to demonstrate compliance with the requirements of section 43 of this rule:

(1) Within twelve (12) months after a system exceeds the lead action level in sampling referred to in section 43(a) of this rule, the system shall demonstrate in writing to the commissioner that it has conducted a material evaluation, including the evaluation in section 37(a) of this rule, to identify the initial number of lead service lines in its distribution system, and shall provide the commissioner with the system's schedule for replacing annually at least seven percent (7%) of the initial number of lead service lines within its distribution system.

(2) Within twelve (12) months after a system exceeds the lead action level in sampling referred to in section 43(a) of this rule, and every twelve (12) months thereafter, the system shall demonstrate to the commissioner in writing that the system has done either of the following:

(A) Replaced in the previous twelve (12) months, at least seven percent (7%) of the initial lead service lines (or a greater number of lines specified by the commissioner under section ~~43(f)~~ **43(e)** of this rule) in its distribution system.

(B) Conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line, taken under section 37(b)(3) of this rule, is less than or equal to fifteen-thousandths (0.015) milligram per liter. In such cases, the total number of lines replaced and which meet the criteria in section 43(b) of this rule, shall equal at least seven percent (7%) of the initial number of lead lines identified under subsection (a) (or the percentage specified by the commissioner under section ~~43(f)~~ **43(e)** of this rule).

(3) The annual letter submitted to the commissioner under subdivision (2) shall contain the following information:

(A) The number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule.

(B) The number and location of each lead service line replaced during the previous year of the system's replacement schedule.

(C) If measured, the water lead concentration and location of each service line sampled, the sampling method, and the date of sampling.

~~(4) As soon as practicable, but in no case later than three (3) months after a system exceeds the lead action level in sampling referred to in section 43(a) of this rule, any system seeking to rebut the presumption that it has control over the entire lead service line under section 43(d) of this rule shall submit a letter to the commissioner describing the legal authority, such as state statutes, municipal ordinances, public service contracts, or other applicable legal authority which limits the system's control over the service lines and the extent of the system's control. \~~

(4) Any system that collects lead service line samples following partial lead service line replacement required by section 43 of this rule shall report the results to the commissioner within the first ten (10) days of the month following the month when the system receives the laboratory results or as specified by the commissioner. A

systems shall also report any additional information as specified by the commissioner. The results shall be reported in the time and manner prescribed by the commissioner to verify that all partial lead service line replacement activities have taken place.

(f) ~~This subsection establishes~~ **The following are** requirements for public education program reporting: ~~By December 31 of each year;~~

(1) Any water system that is subject to the public education requirements in section 44 of this rule shall, submit a letter within ten (10) days after the end of each period in which the system is required to perform public education tasks in accordance with section 44(c) of this rule, send written documentation to the commissioner demonstrating that contains the following information:

(A) A demonstration that the system has delivered the public education materials that meet the content requirements in section 44(a) and 44(b) of this rule and the delivery requirements in section 44(c) of this rule. ~~This information shall include~~

(B) A list of all the newspapers, radio stations, television stations, facilities, and organizations to which the system delivered public education materials during the previous year. The water system shall submit the letter required by this subsection annually for as long as it exceeds the lead action level. period in which the system was required to perform the public education tasks.

(2) Unless required by the commissioner, a system that previously submitted the information required by subdivision (1)(B), as long as there have been no changes in the distribution list and the system certifies that the public education materials were distributed to the same list submitted previously.

(g) Any system ~~which~~ **that** collects sampling data in addition to that required by sections 36 through 45 of this rule, this section, and section 47 of this rule shall report the results to the commissioner within the first ten (10) days following the end of the applicable monitoring period under sections 37 through 39 of this rule during which the samples are collected.

(h) A water system is not required to report the ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples collected in each monitoring period as required by subsection (a)(1)(C) if the following conditions are met:

(1) The commissioner has previously notified the water system that it will calculate the water system's ninetieth percentile lead and copper concentrations, based on the lead and copper results submitted pursuant to subdivision (2)(A), and has specified a date before the end of the applicable monitoring period by which the system must provide the results of lead and copper tap water samples.

(2) The system has provided the following information to the commissioner by the date specified in subdivision (1):

(A) The results of all tap samples for lead and copper including the location of each site and the criteria under section 37(a)(3), 37(a)(4), 37(a)(5), 37(a)(6), or 37(a)(7) of this rule, under which the site was selected for the

system's sampling pool, pursuant to subsection (a)(1)(A) .

(B) An identification of the sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed.

(3) The commissioner has provided the results of the ninetieth percentile lead and copper calculations, in writing, to the water system before the end of the monitoring period.

(Water Pollution Control Board; 327 IAC 8-2-46; filed Aug 24, 1994, 8:15 a.m.: 18 IR 84; filed Oct 24, 1997, 4:30 p.m.: 21 IR 945)